

IN THE CLAIMS

Please add new claim 6⁷.

1. (Currently Amended) A catheter adapted for deployment in a body vessel to occlude flow and remove material located distal to a ~~the~~ site of occlusion, comprising:
an outer elongated hollow shaft configured for introduction into a blood vessel,
an expandable occluder proximate to a distal end of the outer shaft, which expands to
create a distal occlusion within the vessel to isolate substantially isolate a region from a region
proximal of the occluder, from vasculature distal of the occlusion,
an efflux port in fluid communication with an outer shaft lumen that provides for the removal of fluid and material from the ~~region~~ distal vasculature of the occluder through an
opening distal of the distal occlusion,
an inner elongated and hollow shaft configured to slide longitudinally within the outer shaft and extending distal of the distal occlusion, wherein the inner shaft terminates in a rinse
(150)
nozzle having one or more openings ~~proximate to a distal end~~ that allow the fluid contents of an inner shaft lumen to enter the distal vasculature through the one or more openings vessel in the
region distal of the occluder and in a flow pattern determined by the arrangement of the one or more openings,
an influx port in fluid communication with the inner shaft lumen, and
a treatment port that provides access to the lumen of the outer shaft.

2. (Previously Presented) The device of claim 1, wherein the expandable occluder is inflatable and is connected to an inflation lumen incorporated into a wall of the outer elongated shaft.

3. (Previously Presented) The device of claim 1, wherein the expandable occluder is inflatable and is connected to an inflation lumen extending through a separate, hollow elongated shaft that runs parallel to the outer ~~elongated~~ shaft.

4. (Cancelled)

5. (Previously Presented) The device of claim 1, wherein the inner shaft is configured to allow passage of a guidewire through the inner shaft lumen and that extends through an opening in the distal wall of the inner shaft, for the purposes of aiding in the delivery of the catheter and treatment or diagnostic means to the site of interest within a blood vessel.

6. (Original) The device of claim 1, wherein the expandable occluder is self-expanding.

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7. (Previously Presented) The device of claim 1, wherein the expandable occluder comprises open-cell foam surrounded by an airtight sheath and the open-cell foam is in fluid communication with an inflation lumen incorporated into the wall of the outer shaft.

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8. (Previously Presented) The device of claim 1, wherein the expandable occluder comprises open-cell foam surrounded by an airtight sheath and the open-cell foam is in fluid communication with an inflation lumen in a separate, hollow elongated shaft that runs parallel to the outer shaft.

9. (Original) The device of claim 1, further comprising means for varying rates of fluid flow through the influx port and/or the outflux port over time in a manually controlled or programmed fashion.

10. (Original) The device of claim 1, further comprising means for inducing fluid flow within the vessel at or near the treatment site at physiologically relevant flow levels.

11. (Previously Presented) The device of claim 1, further comprising a stent delivery catheter introduced through the treatment port and the outer shaft lumen.
12. (Previously Presented) The device of claim 1, further comprising an angioplasty catheter introduced through the treatment port and the outer shaft lumen.
13. (Previously Presented) The device of claim 1, further comprising a filter ~~distal embolic protection device~~ introduced through the treatment port and the outer shaft lumen.
14. (Cancelled)
15. (Previously Presented) The device of claim 1, wherein the inner shaft lumen is sized and configured for passage of a guidewire.
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16. (Previously Presented) The device of claim 1, wherein the inner shaft lumen is terminated on a distal end by a flexible seal configured to allow passage of a guidewire and to form a fluid tight seal around the guidewire.
17. (Original) The device of claim 1, further comprising a guidewire fixedly attached to a distal end of the inner shaft.
- 18-33. (Cancelled)
34. (Currently Amended) A catheter adapted for deployment in a body vessel to occlude flow and provide fluid exchange distal to an assist in the imaging of vessels distal to the occlusion, comprising:
an outer elongated and hollow shaft configured for introduction into a blood vessel,
an expandable occluder proximate to a distal end of the outer shaft which expands to create a distal occlusion substantially isolates the region within the vessel that isolates a region proximal is distal of the occluder from vasculature distal a region proximal of the occluder,

an efflux port in fluid communication with an outer shaft lumen that provides for the removal of fluid and material from the vasculature region distal of the distal occlusion ~~and through an opening distal of the occluder,~~

an inner elongated and hollow shaft configured to slide longitudinally within the outer shaft and lacking an expandable occluder, wherein the inner shaft has ~~having~~ one or more openings proximate to a distal end thereof that allow fluid within an inner shaft lumen to enter the vessel in the region distal of the occluder in a flow pattern determined by the arrangement of the one or more openings, and

an influx port in fluid communication with the inner shaft lumen.

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35. (Currently Amended) The device of claim 34, further comprising:

a treatment port that provides access to a lumen of the outer shaft lumen.

36. (Original) The device of claim 34, wherein the at least one opening comprises a multiplicity of openings, the openings being angled in a proximal direction with respect to a longitudinal axis of the inner shaft.

37. (Previously Presented) The device of claim 34, wherein the expandable occluder is inflatable and is connected to an inflation lumen incorporated into a wall of the outer shaft.

38. (Original) The device of claim 34, wherein the expandable occluder is inflatable and is connected to an inflation lumen extending through a separate, hollow elongated shaft that runs parallel to the outer shaft.

39. (Cancelled).

40. (Previously Presented) The device of claim 34, further comprising a guidewire that extends through the inner shaft lumen and through an opening in a distal wall of the inner shaft.

41. (Original) The device of claim 34, wherein the expandable occluder is self-expanding.

42. (Previously Presented) The device of claim 34, wherein the expandable occluder comprises open-cell foam surrounded by an airtight sheath and the open-cell foam is in fluid communication with an inflation lumen incorporated into the wall of the outer shaft.

B | 43. (Previously Presented) The device of claim 34, wherein the expandable
occluder comprises open-cell foam surrounded by an airtight sheath and the open-cell foam is in
fluid communication with an inflation lumen in a separate, hollow elongated shaft that runs
Cancel parallel to the outer shaft.

44. (Currently Amended) The device of claim 34, further comprising means for varying rates of fluid flow through the influx port and/or the outflux port over time in a manually controlled or programmed fashion.

45. (Previously Presented) The device of claim 34, further comprising a source of radiopaque contrast agent in fluid connection with the inner shaft lumen.

46-66. (Cancelled)

67. (New) The catheter of claim 1, wherein fluid communication between the inner shaft lumen and the rinse nozzle is configured to eject fluid distal of the occluder and in contact with the outer surface of the inner shaft along an entire distal length thereof.